

A NEW SPECIES OF *OCOTEA* (LAURACEAE) FROM SOUTHEASTERN MEXICO¹

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ABSTRACT

The new species *Ocotea uxpanapana* is a common riparian tree of the Uxpanapa area of extreme southern Veracruz, Mexico. It appears to be most closely related to *O. eucuneata* of Guatemala and Belize. It is yet another species apparently endemic to the rain forests of the Uxpanapa area.

***Ocotea uxpanapana* Wendt & van der Werff, sp. nov.** TYPE: Mexico. Veracruz: Municipio Minatitlán, Zona de Uxpanapa, terracería La Laguna-Uxpanapa, orilla Oeste del Río Oaxaca, un poco al Oeste de Uxpanapa, 17°13'N, 94°13'15"O, 160 m, 14 Feb. 1981 (fl), *Wendt, Villalobos & Olmstead 2869* (holotype, MEXU; isotypes, BM, CAS, CHAPA, ENCB, MO, NY, and others).

Arbor ad 30 m. Ramuli hornotini sericei cito glabrescentes. Laminae foliorum obovatae vel ellipticae, 8–25 cm longae, 2.2–8 cm latae, plerumque 3–4.3-plo longiores quam latiores, apice acuminata, basi acuta vel cuneata, supra glabratae, subtus subtiliter strigosae axillis barbatis. Paniculae pseudoterminales; flores (4–)4.5–6 mm diam.; tepala dense minute canescentia, 1.9–3 mm longa; stamina externa stipitata. Fructus ellipticus, ad 2.2 cm longus; cupula valde 6-lobata. Figure 1.

Tree, to 30 m, to 1 m d.b.h. or often with several trunks from near the base; buttresses small to medium-sized or lacking; bark medium gray-brown to dark chocolate-brown, finely to prominently warty, soft; slash of bark aromatic, light brown or yellowish-brown, oxidizing in ca. 1 minute to darker orange-brown; sapwood pale cream-brown. Shoot apices (youngest portions of stems and new leaves) and axillary buds densely and finely sericeous; twigs soon glabrate, green (drying dark or black). Leaves alternate; blade obovate to elliptic, usually narrowly so, 8–25 cm long, 2.2–8 cm wide, some leaves smaller, mostly 3–4.3 times as long as wide, firmly membranaceous, slightly and irregularly conduplicate, medium-dark green, finely and densely glandular-punctate, distally acute or rounded to a short- or long-acuminate (to 2.5 cm) apex with a minutely

rounded tip, the base acute to usually cuneate; venation slightly raised above, prominently so below, laterals 7–14, diverging at 40–65°, the lowest 1–2 pairs usually more strongly ascending (20–35°), basically eucamptodromous but often more or less brochidodromous distally, the tertiary venation more or less transverse between laterals, the fine venation reticulate; adaxial surface glabrous, abaxially finely strigose on surface and sides of midvein, at length sometimes subglabrate, lowest 1–several pairs of lateral veins prominently barbate in axils; petioles 1–2.3 cm long, canaliculate adaxially, at first finely strigose, soon glabrate. Inflorescence complex formed by a group of paniculate cymes, each of these arising from the axil of a quickly deciduous bracteate leaf (or rarely a foliage leaf), the apex of each complex a small, temporarily dormant vegetative shoot, each inflorescence arising either in the axil of a mature leaf or along the apical portion of the main stem, several inflorescences occurring together to form a large pseudoterminal inflorescence complex, the vegetative apices usually elongating after flowering and producing mature leaves, the fruiting panicles thus more obviously lateral; individual inflorescences 5–20 cm long, 2–13 cm broad, cylindrical to pyramidal, with a more or less straight central axis bearing strongly diverging laterals, the latter sometimes similarly rebranched, bearing dichasial groups of flowers, the axes flattened, green to pinkish, lightly canescent to glabrate in basal parts, to densely canescent distally; flower bracts lance-ovate to deltate, 2–2.5 mm long, densely and finely canescent, very quickly deciduous; pedicels stout, 1.5–3.5 mm long, densely and finely canescent, green. Flowers (4–)4.5–6 mm diam. at anthesis;

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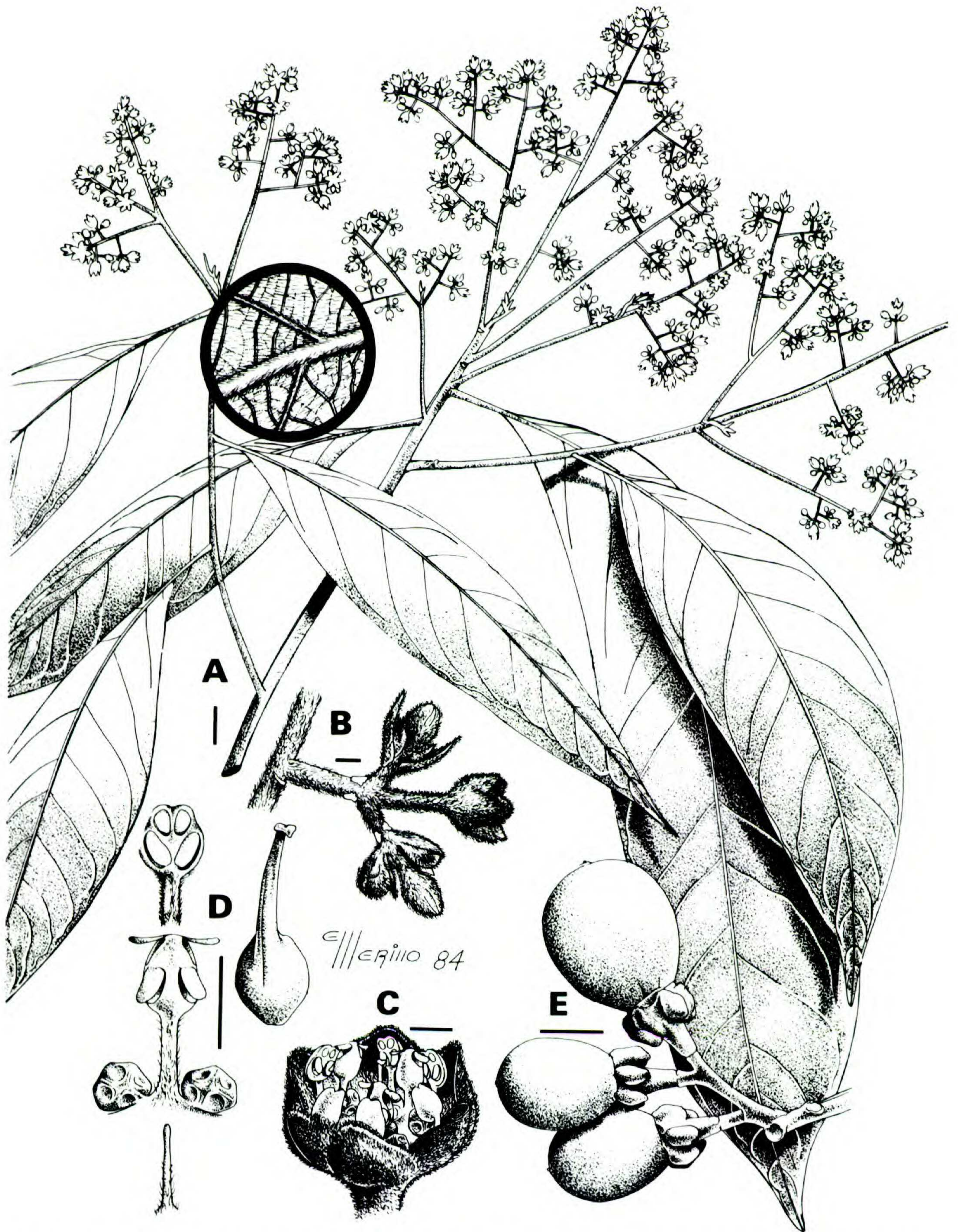


FIGURE 1. *Ocotea uxpanapana*.—A. Branchlet with inflorescences; inset, lower surface of leaf.—B. Portion of inflorescence, pre-anthesis.—C. Flower.—D. Parts of the flower: above, outer stamen, adaxial view; center, inner stamen, abaxial view; below, staminode (frequently absent); right, gynoecium.—E. Fruits with unique lobed calyx. Bar scales: A, E = 1 cm; B, C, D = 1 mm. Vouchers: A–D, *Wendt et al.* 2869 (staminode in D, 2865); E, *Wendt et al.* 2777.

tepals at anthesis ascending 25–45° or more, broadly ovate, 1.9–3 mm long, 1.5–2.4 mm wide, thick-textured, cream to creamy-green, abaxially canescent with short, thick, gray hairs mostly 0.05–0.15 mm long, adaxially less densely so, the apex broadly acute to acute; hypanthium 0.6–1 mm long. Outer 6 stamens 1.1–1.6 mm long; filaments 0.5–0.9 mm long, pubescent; anthers quadrate-ovate, with truncate to emarginate apices, and with the upper pair of thecae more or less above the lower pair; inner 3 stamens 1.5–2 mm long; filaments 0.7–1.2 mm long, pubescent, the basal pair of glands short-stipitate to subsessile; staminodes absent or, when present, less than 1 mm long, linear, pubescent. Ovary 1–1.5 mm long, glabrous; style (0.5–)1–1.4 mm long, shorter than to slightly longer than ovary. Fruit (nearly mature) broadly ellipsoid, to 2.2 cm long, to 1.9 cm thick, green, seated in a very shallow strongly 6-lobed red, fleshy cupule, the lobes 5–7 mm long, 3–5 mm high, 2–3 mm thick; flesh of fruit ca. 1 mm thick, pale green. Testa dark brown; flesh of cotyledons pink.

Paratypes. MEXICO. VERACRUZ: Zona de Uxpanapa. *Mpio. Hidalgotitlán*: Campamento La Laguna, along Río Las Cuevas, 6 Mar. 1984 (fl.), *Taylor 387* (F, MO, XAL); Campamento Hnos. Cedillo, 18 Jun. 1974 (fr), *P. E. Valdivia Q. 808* (MO, XAL); Propiamente en la Escuadra, 7 Aug. 1974 (fr), *P. E. Valdivia Q. 1312* (MO, XAL); A 600 m del Campamento Hnos. Cedillo hacia Paso Moral, 8 Aug. 1974 (fr), *P. E. Valdivia Q. 1334* (MO, XAL); Campamento Hnos. Cedillo, 17°16'N, 94°36'W, 150 m, 27 Aug. 1974 (young fr), *Brigada Vázquez 1029* (MEXU, MO); Brecha Hnos. Cedillo-Agustín Melgar, 5 Mar. 1974 (fl), *Brigada Vázquez 535* (MO, XAL); La Escuadra-Hnos. Cedillo, por el Río Soloxuchil, 3 May 1974 (fr), *Brigada Vázquez 729* (MO, XAL); Campamento La Laguna, Río Las Cuevas, 17°16'30"N, 94°30'W, 130 m, 17 Mar. 1982 (fl), *Wendt, Villalobos & Navarrete 3725* (CHAPA, MEXU, MO, and others); *Mpio. Minatitlán*: Río Uxpanapa, desde el poblado de Uxpanapa arriba, 17°12'N, 94°10'W, 130 m, 14 Jul. 1980 (young fr), *Wendt, Villalobos & Lara 2564* (CHAPA, MEXU, MO, and others); Uxpanapa, orilla del Río Uxpanapa, 17°13'10"N, 94°12'45"W, 130 m, 27 Sep. 1980 (fr), *Wendt et al. 2777* (CHAPA, MEXU, MO, and others); 32 km al E de La Laguna sobre terracería a Uxpanapa, 1.1 km al W de La Garganta, 17°13'30"N, 94°15'30"W, 180 m, 13 Feb. 1981 (fl), *Wendt, Villalobos & Olmstead 2865* (CHAPA, MEXU, MO, and others); type locality and date, *Wendt, Villalobos & Olmstead 2869A* (CHAPA, MEXU, MO, and others).

Common names. Aguacatillo, laurel.

Ocotea uxpanapana is a common riverside tree of the Uxpanapa area of southern Veracruz, a region of lowland rain forests with high endemism (see Wendt et al., 1985, and references there cited); it is interesting that this riparian tree

has never been collected farther downstream in the Río Coatzacoalcos basin. In the Uxpanapa area, the new species and *Ficus insipida* Willd. are the most common large riparian trees. The root system of *O. uxpanapana* is apparently deep and well adapted to resist flooding; during the major flooding of the Río Oaxaca in October of 1980, all trees (including *Ficus insipida*) except for many individuals of *O. uxpanapana* were toppled and carried away. *Ocotea uxpanapana* also occurs scattered in nonriparian sites on deep limestone-derived soils. It flowers mostly in February and March, fruiting in September and October.

Ocotea is a large, mostly neotropical genus with a few hundred species. The last comprehensive treatment was by Mez (1889), and since that time many additional species have been described. The Central American species were treated by Allen (1945), but the genus has remained difficult and almost inaccessible to the nonspecialist. Under these circumstances, we were initially hesitant to describe yet another *Ocotea* species, but the striking, deeply six-lobed cupule is such a unique feature in the genus, even in the family, that we decided to publish a new species. It appears to be most closely related to *O. eucuneata* Lundell (type from Belize). In addition to its less strongly lobed cupule (fruiting material collected in the mountains of Guatemala, identified by C. Allen), *O. eucuneata* differs in its inflorescences borne in the axils of mature leaves (not forming a pseudoterminal inflorescence as in *O. uxpanapana*), its smaller flowers, and in having the reticulation on the upper leaf surface immersed (not raised as in *O. uxpanapana*).

Specimens collected by the Brigada Vázquez and P. E. Valdivia Q. are distributed under several names (*Nectandra loeseneri* Mez, *N. salicifolia* Kunth, *Persea americana* Miller, and *Phoebe gentlei* (Lundell) Standley & Steyerf.) and are likely filed as such in several additional herbaria.

Wood and bark samples of the new species (*Wendt et al. 3725*) were examined by H. G. Richter. He noted (pers. comm.) that the wood and bark anatomy are typical of *Ocotea* in general and are nondescript within the genus.

LITERATURE CITED

- ALLEN, C. K. 1945. Studies in Lauraceae, VI. *J. Arnold Arbor.* 26: 280–434.
 MEZ, C. 1889. Lauraceae Americanae. *Jahrb. Königl. Bot. Gart. Berlin* 5: 1–556.
 WENDT, T., S. A. MORI & G. T. PRANCE. 1985. *Eschweilera mexicana* (Lecythidaceae): a new family for the flora of Mexico. *Brittonia* 37: 347–351.